Irrigation
Under
Wasatch
Skies

p. 25
88—99

pict Abram Hatch
" Joseph Stacy Jr
p 55

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Irrigation

"Under Wasatch Skies"

A History of

Wasatch County

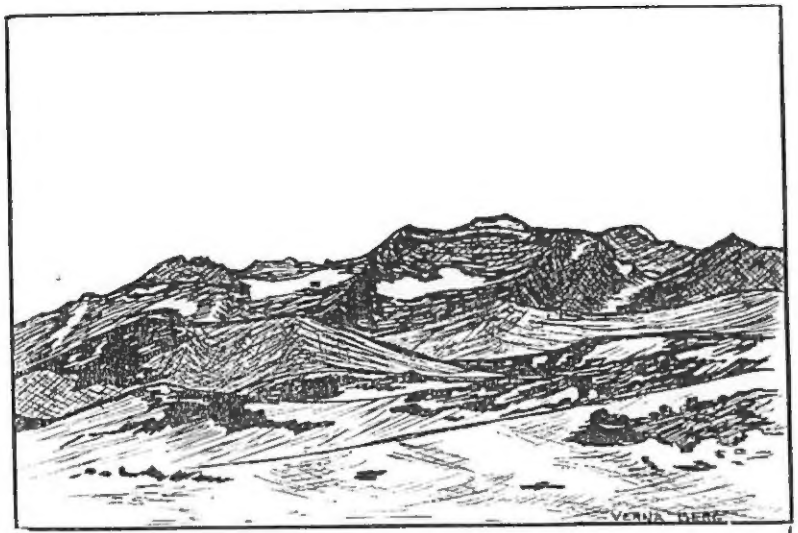
1858 — 1900

THE DESERET NEWS PRESS

1954

pp 88-98

Copied 11-5-00



"For the Strength of the Hills We Bless Thee"

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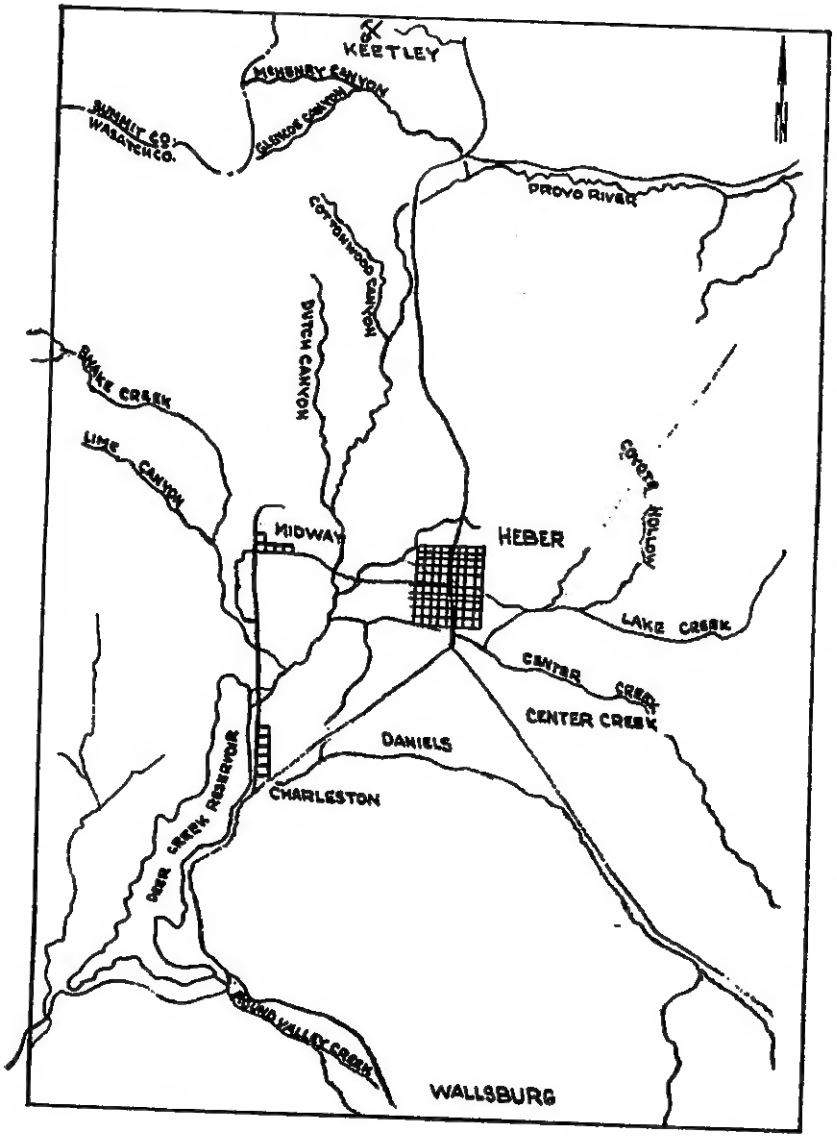
PREFACE

This is the story of the foundatior development of Wasatch County. The wr' those factors in the pioneering ventur made important contributions to present county. This is also a story of the pioneers ... here, a story of how they individually and collectivey met the challenge of the frontier. But in addition to this, the effort has been made to picture one part of a phase in general Utah history, a phase which followed the original settlement, a phase in which an effort was made to tap the vast mineral and timber resources of the Wasatch Mountains and valleys.

No one realizes the inadequacy of the attempt more than the writer. I am, however, very indebted to those who have contributed materially to whatever merit this story has. Dr. Richard D. Poll of the Brigham Young University has been most generous and patient in taking time to criticize the manuscript and point out those errors to which I am particularly prone. I would also like to acknowledge the assistance and many kindnesses of the Wasatch Camp of the Daughters of Utah Pioneers at whose request this history was written. Emma Hatch Wherritt, President, and the committee, consisting of Lethe Tatge, Hazel Giles, Julia Anderson, Gladys Winterton, Bernice Alder Simpson and Ethyl Johnson, have made untiring efforts to place at my disposal all the locally available source material for this history. My thanks are also extended to Clavell Raty for aid in correcting proofs and for the careful typing of the final draft.

LESLIE S. RATY

To:
Dr. Green
With best regards
from
Jack & Jeanne Fisher
6 Oct. 1962



CHAPTER IX

IRRIGATION

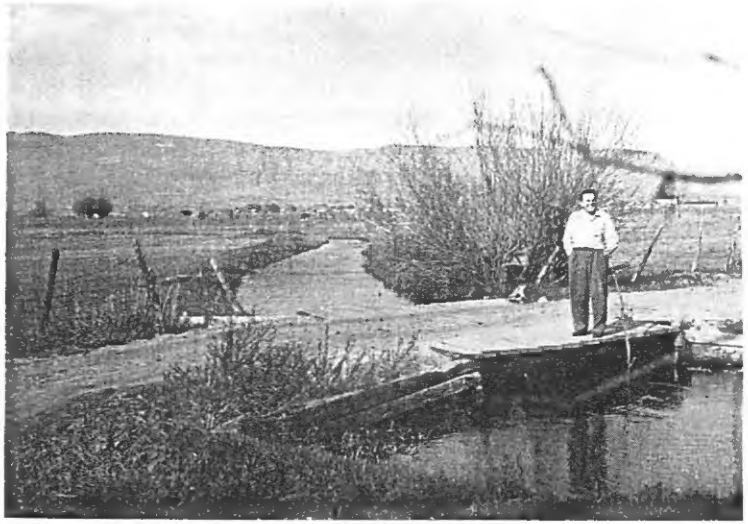
Of all the phases of pioneer life which were to test the ingenuity, resourcefulness, and cooperative spirit of the people, irrigation was foremost. At times the problem was not solved with cooperation and then there was fierce competition for water among the settlers. Water was precious to those who hoped to farm the semi-arid range lands in the Wasatch valleys, and an understanding of their life would not be possible without the story of irrigation.

The scene for pioneer irrigation in Wasatch County was laid in the roughly bowl-shaped Provo Valley. The Provo River winds through its center from north to south, and a number of small streams bearing the annual run-off of melted snow and a small amount of spring water ran from its mountainous perimeter to the river in the center. Prior to cultivation, the land in the valley could properly be termed open range. Grass grew rather abundantly along the river bottom and sides of the streams, while the rest of the land was covered with sagebrush, wheat grass, weeds, and wild flowers. The mountain sides were heavily timbered with aspen, fir, and Engleman spruce. Stock was grazed here before the farming settlers came, and the vast timber resources of the region prompted the building of the road up Provo Canyon.[1] These two interests shared competitive roles with the settlers who came to till and irrigate the soil.

The pioneer need of bringing water onto the land found its solution in the irrigation ditch or canal. Canals were incorporated, zealously presided over, guarded by local law, and fought over in courts. Irrigation water

[1]*Journal History*, June 6, 1858, p. 2.

was carefully supervised and proportioned out as a dividend on stock held in the ditch. Meetings were regularly held to discuss the maintenance and improvement of the



Charleston Upper Canal

irrigation canal system. The canal and the status of the irrigation water was as important here as was the status of the weather to the midwestern farmer.

The first settlers in Wasatch county were familiar with irrigation. They had come from the surrounding Utah settlements where this means of watering the land was a well-established practice. The very nature of irrigation made cooperation among them necessary except in the most isolated cases. At first they merely dug ditches which ran from the creeks to their adjoining farms and took as much water as they needed. But with the increase of valley population, it was necessary to manage and regulate the amount of water each could

have and the length of time he could use it before it was passed on to the next farm. Then too, when there was insufficient water for the increasing number of farms,

Lindsay Reservoirs, one of first water storage projects in Utah

creeks lying to the east of town. Many people were coming up that summer to claim the eastern lands and those living on the city plots were worried that the new settlers might appropriate the waters of Lake and Center Creeks and the springs for their use instead of drawing upon the Provo River. The day following the meeting,

the Heber residents turned out en masse and constructed the ditches necessary to bring all of the eastern waters into the city.[2]

e cooperative organization required to bring the into Heber was both temporary and informal; but , the year in which most of the then existing on systems were incorporated, a standard form eration in irrigation had emerged. This was the on company.

rly irrigation companies were incorporated under rritorial laws in an act "compiling and amending s relating to private corporations, March 13, The form or organization which they adopted proximately standard for all. In the first phase, ing of all the people concerned was called; and, greement to form an irrigation company, a com- was appointed to draft the articles of incorpora- he articles described the purpose of the company, anization, the amount of capital stock, and the of shares to be issued. When the company group epted these articles, the by-laws were drawn up, specified the duties of the company officers and ose officers were elected.[3]

e board of directors was the most important and l group of officers. They had power to make ppoint the water masters, and divide the water, was declared an annual dividend on the capital the company. To the president was granted the superintendence of company affairs. Under the sion of the board of directors he presided at meetings, signed stock certificates and contracts, and drew

[2]Crook, "A Statement Concerning Securing Water Rights to Heber City in 1859," *op. cit.*

[3]"Minutes of the Midway Irrigation Company," MSS, (Daughters of the Utah Pioneers Historical Collection, Midway, 1889-1952), pp. 1-6.

up orders on the treasury. Generally there were two other elected officers—a treasurer and a secretary.

The office of water master was both appointive and paid. He supervised the use of the water and therefore handled any complaints which arose over using the water out of turn. There were always complaints and the remuneration was scant compensation for the strife which often arose. Heber Giles, who was water master for the North Field Irrigation Company, in 1890 received twenty-five cents an hour while working in water and twenty cents an hour working out of water.[1]

Most companies were concerned with building canals to tap the constant supply of water coming down the creek or river and then regulating it so that everyone would get his share. But one of the greatest problems, particularly for the later settlers, was that there just wasn't enough water for all. There was still good land to be had for those who could water it. As late as 1889 the county surveyor reported that there were 14,000 acres of arable land yet to be brought under irrigation.[2] Getting the desperately needed water by means of such projects as the Center Creek Reservoirs, the tunnel to the Strawberry River, and the Timpanogos High Water Canal, is a fascinating story of pioneer ingenuity and cooperation.

Center Creek is a small stream, five or six feet wide, and possibly two feet deep, which runs from the mountains east of Heber City into the Provo River. During the early settlement of the valley a number of farms were laid out along its banks. Before long, the first farm owners were utilizing all of the creek water for irrigation so that during the years that followed there

[1] "Minutes of the North Field Irrigation Company," MSS, (Wasatch County Courthouse, Heber City, 1889-1952), p. 1.

[2] William Buys, "The Irrigation System of Provo Valley," *Wasatch Wave*, December 21, 1906, p. 4.

was insufficient water for the new settlers. This was a period when feelings ran high among the two groups. er the new settlers met in

First water to Heber Valley from Colorado watershed. (Daniel)

James Lindsay

ned to go up Center Creek reservoir sites. The leader ay, and his experiences in were typical of many of lerwent at this time.

James Lindsay was born in Scotland in 1849. His father was killed mining coal in 1861, leaving his widow and four sons—Robert, William, James, and Andrew. The Lindsay family was converted to the Church of Jesus Christ of Latter-day Saints and emigrated to America. They came to Heber in 1862 and later homesteaded land

along Lake Creek. In 1877 James bought Sidney Worsleg's property on Center Creek, and a year later he joined with the other new settlers on the reservoir project.[6]

The first problem was locating the dam sites for the reservoirs. The dams could not be put on the creek itself because of the attitudes of the older settlers. Instead, they were located off to one side of the stream on various flats in the canyon. The reservoirs were then fed by lateral ditches running from the creeks. Each spring the annual run-off of melted snow from the mountain sides glutted the little streams, and it was this high water that the new settlers wanted to conserve until the fall when the creek level dropped once more. It was later found that not only the high water, but also the entire creek water before the irrigation period began and after

[6]The Journal of James Lindsay, MSS, (Daughters of Utah Pioneers Historical Collection, Heber City, 1920), p. 8.

it ended, could be saved. Putting the reservoirs off to one side had definite advantages. The reservoirs were not filled with silt or dirt as they would have been had they been built on the stream. When they were filled the water was allowed to run down stream so that there was no danger of the dam breaking or washing away.

The pioneers began work on the reservoirs in 1879, and each year for the next fifteen or twenty years they drove their teams and wagons up the timbered slopes to gouge out rock, clay, and dirt for the five dams which backed up enough water to assure them a harvest in the fall.

This resourcefulness was met coldly by the old settlers, who felt that the reservoir water rightly should belong to them. Though repeated attempts were made to amalgamate the holdings of the Center Creek Company and the reservoir company, they were not successful.

e quarreled with the old settlers about the
to fill the reservoirs. . . . Creek Company
d settlers) would go up the canyon and shut
ter off and perhaps we would not know it for
days, so the feelings were anything but
it.

e were hounded and hated for doing what the
county was doing. Now we were the pioneers
Reservoir building. . . . Our work proved to
salvation and savior of our little community.
I first came on the creek there was no hay
. . . They fed straw to their stock. . . . The
llers had made no ditches, built no reservoirs
ne anything to improve the little town.[7]

communities in the valley, faced with the
lem, also built reservoirs. But in the case of
ating along Daniels Creek the canyon was too
ake reservoir building feasible.

. 8.

The search for additional water led the Daniels Creek settlers even to streams running on the other side of the mountains. They had watched with despair as yearly the water level in Daniels Creek fell, until by the end of summer only the springs along the foot of the mountain were left to supply both culinary and irrigation needs. The Strawberry River, with its tributary creeks, was draining the watershed on the other side of the mountain and it was to this source that Hiram Oaks and a few companions turned in 1879.

With a spirit level and plumb bob they surveyed what were later incorporated as the Strawberry and Willow Creek Canals.[8] These canals were designed to bring the water across the mountains into Daniels Canyon. By 1882 the Daniels settlers had finished the three-mile-long Strawberry Canal at a cost of six thousand dollars. The thirty-three second-feet of water proved insufficient for later needs and so the Strawberry company began work on a second canal system designed to draw upon the high water from Strawberry Creek and the low water from Willow Creek for use on the other side of the mountain. The old company abandoned the project when the expense became too great. Those who had worked on the Willow Creek Canal then formed the Willow Creek Irrigation Company, which finished the seven-mile canal in 1893. This canal had a capacity of twenty-one second-feet and the water ran through a tunnel one thousand feet long, built at a cost of fifteen thousand dollars. When completed the project irrigated an additional thousand acres of land.[9]

The Timpanogos High Water Canal was a project designed to supply water to those land owners who had settled parallel to the river bank but above the level of

[8]Julia M. Anderson, "History of the Daniels Irrigation Company," MSS, (Daughters of Utah Pioneers Historical Collection, Heber City, 1952), p. 2.
[9]Buys, *op. cit.*

water at the point the river passed their farms. The first settlers to use the Provo River water had laid out a large plot of land called the North Field, along the east bank of the river just northwest of Heber City. The field comprised about three thousand acres, and those who farmed this land held the oldest water claims in the valley.[10] Originally these were individual claims, but in 1889 the claims were consolidated into the North Field Irrigation Company for the purpose of regulating the water supply and maintaining the irrigation system.[11]

The Provo River was again tapped for irrigation by the Wasatch Canal Company. Settlers with shares in this canal cultivated about two thousand five hundred acres of land east of that watered by the North Field irrigation system and the Spring Creek Canal. The Timpanogos Canal was designed to water additional land lying farther east by utilizing the high water from the Provo River.

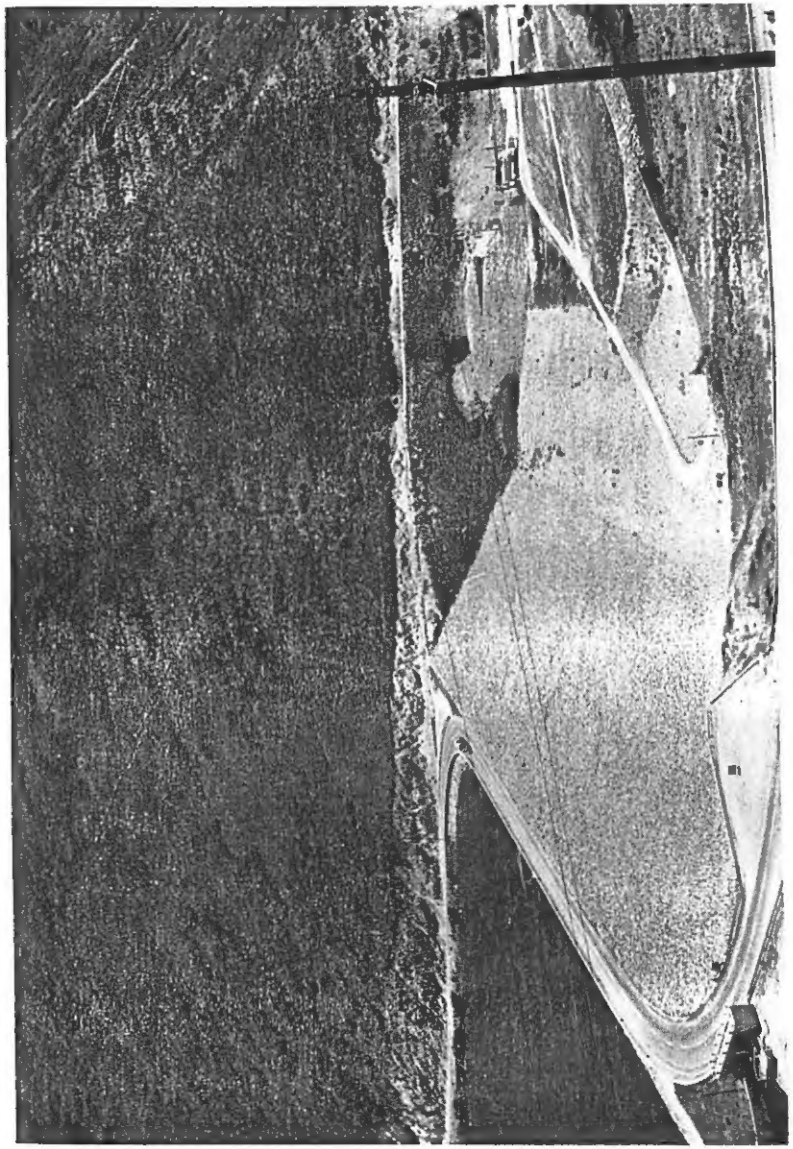
The Timpanogos Company was incorporated on May 31, 1895. A committee appointed to survey the proposed canal planned it to be twelve and one-half miles long beginnning at a point on the river six miles north of Heber. Later the lakes at the head of the Provo River were also reservoired and the high water there was retained for use by this company.

One other facet of irrigation which has profoundly influenced life in the valley has been the Provo River project. Although it falls beyond the period of pioneer history considered here, it is of such general interest as to warrant some mention.

The project was designed to conserve the run-off of the Provo River and its tributary streams as irrigation water for some one hundred thousand acres of farm lands in the Utah and Salt Lake Valleys. This required the

[10]Buys, *op. cit.*
[11]"Minutes of the North Field Irrigation Company," *op. cit.*

construction of a dam at the southern end of Provo Valley. Work on the dam began in 1938 and was completed in 1941. The Deer Creek Reservoir, as the project was named, covered thousands of acres of range land and inundated two-thirds of the town of Charleston.



Deer Creek Reservoir